附件四：

新北市 106 年度教師以全英語授課教案設計

說明:

1. 原教案設計為兩節課，經第二階段議課討論後，改為三節課。
2. 教案修改部分用不同顏色，同時加上底線標明。紅色表示第一階段已設計，但沒有描述，現在補述的教學活動。藍色表示根據第一階段評審意見修改與第一階段後自行增加的教學活動。黃色部份表示經第二階段議課，根據評審、其他教師與我自省之後增加的教學活動。

設計者 / 服務學校	羅文珠 / 淡水國小
教案名稱	English Master – Mathematic Addition (英語達人 – 數學加法)

教學年級：國小 3 年級	預計課程上使用之英語比例：99-100 ％ （使用英語比例係指教師以英語授課之時間佔總授課時間之比率）

學生人數:24 人	教學總節數:3 節	預計公開授課內容為第 2 節

公開授課時間： 民國 106 年 11 月 22 日上午第三節 (10:30-11:10)	公開授課地點： 新北市淡水區淡水國小 英語教室 A

教學目標 （請具體寫出學生所須學習的單字或句型）	One, two, three, four, five, six, seven, eight, nine, ten, zero One plus one is two. 劃線部分（如：____）表示可以代換同類的字詞 What's your/my number? My/Your number is _____. Guess my number. Your number is _____. How can I make 2? 1 plus 1 is 2.
九年一貫對應 能力指標 (請以本市頒布之英語課綱敘寫)	A2-1-3 能說出中年段所習得的詞彙。 A5-1-2 能聽懂及說出中年段所習得的詞彙。 A5-1-5 能聽懂常用的教室用語，並作適當的回應。 附加：數學課綱第一階段(國小一二年級，本課程只設計加法的部分) N-1-02 能理解加法、減法的意義，解決生活中的問題。 N-1-03 能理解加、減直式計算。 說明: 1. 原教案實施是二年級，但參加全英語教案甄選後，會升上三年級，所以第二階段的公開觀課會在三年級實施。 2. 教案中基本單字是 0 與 1-10, 其中 1-10 是三年級課本 Dino on the Go (翰林版)的單字，但在一年級的 Go, Go, Starter (康軒版)的課前預備單元就出現過。因是常用字彙，我在低年級的時候也已經額外補充教導 1-10 的英語與數字的認讀。 3. 教案中句型部分有 my, your, 和新的句型: 1 plus 1 is 2. How can I make 2? 因此列為中年級的句型，但在教案在二年級實施的時候，並沒有太大的問題，我的經驗是二三年級的孩子都能夠適應新句型。 4. 長期使用全英語教學，教室用語在低中年級都超出課本涵括的範圍，因此學生在 A5-1-5 的能力在水準之上。

教案名稱：English Master – Mathematic Addition (英語達人 – 數學加法)						
說明:灰階表示重點，教師語言的劃線部分（如：＿＿＿）表示可以代換同類的字詞。						

	教學目標	教學流程及活動設計	時間	教學資源	教師語言
以下為第一節課	Students are able to count number from one to ten.(學生能夠數數一到十)	【Motivating 引起動機】 1. Review 0-10 1.1 Singing (歌謠教學) 　Teacher shows the video clip and guides students to sing. 1.2 Teacher distributes the number cards 1 to 10 and guides students to sing and raise the number in the right time. 1.3 Teacher distributes the number 1 to 10 to another ten students and repeats the above task.	7'	**https://www.youtube.com/watch?v=Yt8GFgxllT**	What is it? It is <u>one</u>. All right. Let's learn a member song. <u>One</u> little, <u>two</u> little, <u>three</u> penguins. Ten little penguins. One more time. Take the number. One more time and raise the number. Everybody go.
	Students are able to apply counting from one to ten in school life situation. (學生能夠應用數數一到十在學校生活情境中)	【Developing 發展活動】 2. Making a group(幾人一圈) 2.1 Teacher guides the students to demonstrate how to make a group of three. 2.2 Teacher has the entire class to make groups with the member assigned.	5'		All right. Let's try a game. Let's make a group. I want a group of three. One, two and three. Make a circle. It is a group of three. If you are finished, say 'finished' and raise your hands. Are you ready? Let's go. I want a group of <u>four</u>.
	Students are able to apply counting from one to ten in school life situation. (學生能夠應用數數一到十在學校生活情境中)	3. <mark>Support (typo)</mark> front lines (支援前線) 3.1 Teacher guides students to set up the tables and chairs in clusters. 3.2 Teacher has one group to demonstrate collecting the things told, for instance, ten pencils. 3.3 Teacher guides the whole class to collect the things told. 3.4 Teacher guides students to check the things collected from each other.	7'		Now, let's play another game. What is this? It is a <u>pencil</u>. Group <u>one</u>, raise your hand. Now let's try. I want <u>five</u> <u>pencils</u>. If you are finished, say 'finished' and raise your hands. Are you ready? Let's go. I want <u>seven</u> <u>erasers</u>. Group <u>one</u>, good job. Now I want <u>eight</u> books. Are you ready? Go. Group <u>one</u>, please count. Group <u>two</u>, stand up and stand around the group <u>one</u>, Group <u>one</u>, count. Group <u>two</u>, are they right? Great! They are right. Give them a big hand. <mark>說明: 這是第二組整組學生圍在第一組學生觀察，並監督第一組學生數對或數錯。並在確定第一組學生數對後，給予鼓掌獎勵。</mark>
	Students are able to apply numbers from one to ten in communication. (學生能夠應用數字一到十溝通)	4. What is your number? (你的數字是…?) 4.1 Teacher demonstrates and has students to listen and repeat the dialogue. 4.2 Teacher guides students to write down their numbers. 4.3 Teacher has two students to role play the dialogue with their numbers. 4.4 Teacher guides the whole class to talk in pairs.	7'	**Markers, mini white boards, erasers**	Now, class, listen and repeat. A: What is my number? B: Your number is <u>1, 2, 3</u>. A: What is your number? B: My number is <u>4, 5, 6</u>. Pass the markers, erasers and mini white boards around. Everybody get one. Everybody write a number of __ __ __on the board. I need two volunteers. All right. Judy and Victor, come here. Bring your boards. Judy, you ask " what is your number?" Victor, you answer "my number is …. Victor, your turn. You ask Judy, "what is your number? And Judy, you say… Good job. Everybody, give her a big hand. Now, line 1, 3, 5 , raise your hand. You are A. Line 2, 4, 6, raise your hand. You are B. A, you ask, " what is your number" to B? B, your turn. You ask A about the number. A, you show your number and tell B the number.

				Now everybody stand up. Push in your chair. Go talk to four friends. Two boys and two girls. If you are finished, say "finished" and raise your hand. Are you ready? Let's go. Great! You did a good job. Sit down. Clear the board, please.
Students are able to apply numbers from one to ten in communication. (學生能夠應用數字一到十溝通)	5. Guess My Number(猜猜我的數字): 5.1 Teacher and a student to demonstrate the writing and talking task. 5.2 Teacher guides students to finish the above task in different pairs when they sit down. 5.3 Teacher guides students to finish the above task when they move around the classroom.	7'	Markers, small white boards, erasers	Let's try another game. Listen and repeat. A: Guess my number. B: Your number is 1. A: You are right. Good job!/I am sorry. You are wrong. Guess one more time, please. Everybody take a board, a marker and an eraser. Everybody, write down your number on the board. Show me your board. Very good. I need two volunteers. John and Mary, come here. Mary, you tell John, "Guess my number." John, you guess, saying "your number is …" Mary, is John right? No, he is not right. Then you tell John, "I am sorry. You are not right. Guess one more time please. Now, John, it's your turn. You ask Mary, ….Good job. Is Mary right? No, she isn't. What do you need to tell Mary? You say, "I am…." Super. Everybody, are you ready? Great. Go to talk to 5 friends. If you are finished, go back to your seat and sit down. All right. Stop. Do you want to play it one more time? Great. Let's play it one more time. Clear your board. Write another number. Raise your board and let me see. Good. Are you ready? Go four new friends to talk. If you are finished, please sit down. Off you go.
Students are able to apply number one to ten in drawing, including creative drawing. 學生能夠應用數字一到十描述圖畫，包括創意性的圖畫。	【Integration and conclusion 統整與總結】 6. Drawing (typo) a person and monsters (畫人與怪物) 6.1 Teacher draws a person with the basic description, such as one head and two eyes. 6.2 Teacher guides students to say the basic description, such as three heads, six eyes, to draw a monster. 6.3 Teacher guides the students to draw their own monsters and describe the body parts.	7'		Now, let's draw a person. I have one head. You tell me. Two eyes, two ears, one nose, one mouth, two arms, two hands, ten fingers, one body, two legs, two feet and ten toes. Very good. Let's draw a monster. You tell me. I have one head(s), two eyes… Now you draw your monster on your board. If you are finished, raise your board. Show me the monster. Tell me about your monster, saying "My monster has three heads, six e yes…"

以下為第二節	Students are able to count numbers form one to ten. (學生能夠數數一到十) Students are able to recount numbers from ten to one. (學生能夠倒數十到一)	【Motivating 引起動機】 1. Counting (正數一到十，然後倒數) 1.1 Teacher guides students to count 1 to 10. 1.2 Teacher guides students to count 10 to 1.	2'		Let's count from one to ten. Then Count ten to one.
	Students are able to say the statement of addition. (學生能夠陳述加法) Students are able to operate addition with their finger practice. (學生能夠在手指操作中練習加法)	【Developing 發展活動】 2. 1 Plus 1 is 2. (手指加法) 2.1 Teacher guides students to listen and repeat the sentence pattern, one plus one is two. 2.2 Teacher uses their fingers to present the above sentence. 2.3 Teacher has students to say the above sentence with their own fingers. 2.4 Teacher has two students to demonstrate saying the above sentence with their fingers. 2.5 Teacher guides the entire class to say the above sentence with their fingers.	3'		What is this? Yes, one plus one is two. Look at my fingers. How do you say this? Yes, two plus two is four. Let try together. Raise three fingers of your right hand, saying " three" . Raise two fingers of your left hand, saying "and two". Now put two hands together, saying, 'is five". I need two volunteers. Tim and Lucy, come here. Tim, you first. You say… Good job. Lucy, it's your turn. Very good. I need two more volunteers. Pam and Rock, come here. Pam, you first. Good job. Rock, it's your turn. Very good. All right, line 1, 3, 5, you are A. Line 2, 4, 6, you are B. A, you show your fingers to B and saying __ plus ___ is ____. B says "good job." Then, it is B's turn. Very good. Are you ready? Off you go. Stop. Now, change. Talk to the person behind you, saying __ plus ___ is ____. Stop. Now, change. Talk to the person across from you, saying __ plus ___ is ____.
	Students are able to operate addition with their finger game. (學生能夠在手指遊戲中操作加法)	3 Number Champion (數字冠軍) 3.1 Both the teacher and a student use the fingers of one hand to represent the sentence of addition. Both of them need to say the sentence at the same time. 3.2 Teacher has students to do the same activity in pairs. 3.3 Teacher and a student to do the same activity one more time. This time the slower one needs to stand behind the faster one. The slower one needs to put his/her hands on the shoulders of the faster one. 3.4 Teacher has two students to demonstrate the above game. 3.5 Teacher guides the entire class to play the above game.	5'		Let' s try a game. I need a volunteer. Jack, come here. You use one hand. I use one hand. We put the other hand at the back. We say, "one, two, three." Then, we show the fingers at the same time and say, ___ plus ___ is ___. The slower one needs to go behind the faster one. Put the hands on the shoulders of the faster one. Are you ready? Go. One, two, three. I am faster. You go behind me and put your hands on my shoulders. I need two volunteers. Betty and Adam, come here. Are you ready? Say one, two, three. And show the fingers. All right? Betty is faster. Adam, go behind Betty and put your hands on her shoulders. Class, are you ready? All right. Stand up. Push in your chairs. One, two, three, go. Now stop. John, Betty, Mary, Victor, you are the heads of the teams now. Let's see. Who is the champion? John and Betty, you two first. One, two, three, go. John, you won. Better, you go behind John. Now Mary and Victor. One, two, three, go. Victor, you won. Mary, you go behind Victor. Now, who is the champion? John and Victor, are you ready? One, two, three, go. Victor, you won. John, you go behind Victor. Victor is the number champion. Hurray!

Students are able to operate addition with cubes. (學生能夠在積木操作中練習加法)	4　Operating cubes (操作積木) 4.1 Teacher demonstrates how to put the cubes together while saying, one plus one is two. 4.2 Teacher guides the whole class to follow the above procedure in pairs. **4.3 以下為第二階段議課後所增加活動:** **4.3.1 Teacher guides the students to work in pairs. Along with the cube operation, students select their own numbers and say the sentence pattern: One plus one is two.** **4.3.2 Teacher have students to demonstrate their cube operation and sentence saying voluntarily.**	5' 5'		All right! Now, pass the paper. One person from each pair, come to take a box of cubes. Let's see. There is a paper and ten cubes for each pair. A, raise your hand. B, raise your hand. Good. A, when I say, one, you take one and say "one". B, when I say two, you take two and say "plus two". Then A and B together, say, "is three." Are you ready? Go. If you are finished, raise your hand. One, <u>two</u>. Good, very good. **第一階段後自行增加:** **Now let change a bit.** **If I say no. one, you first. 1 plus 1 is two.** **No. one, you take one cube and say 'one'. No. two, you take one cube and say 'plus one'. You two together say 'is two'.** **If I say no. two, you first. 1 plus 1 is two.** **No. two, you take one cube and say 'one'. No. one, you take one cube and say 'plus one'. You two together say 'is two'.** Stop now. The last person in each line. Collect the paper for me. One person for each pair, get the cubes back to me. Thank you. **以下為第二階段議課後所增加活動:** **4.3 All right. Now you may choose your own numbers to make a sentence. John and Jerry, stand up, please. Eyes on us. John, say a number. Five, great. You take five cubes. Jerry, say a number. Three, great. You take three cubes.** **Together, you say five and three is eight.** **Is this all right? Great. Wendy and Luck, you try. Great.** **Everybody, go.** **Who would like to show me your sentence and cubes?**
Students are able to operate addition with their math boards. (學生能夠在數字板操作中練習加法)	**根據第一階段評審意見增加活動:** **5. Listen and Write 聽寫數字** **5.1 Teacher say one-digital numbers (from 0, 1-9) and have students to write them on the broad.** **5.2 Teacher say two-digital numbers (from 0, 1-9) and have students to write them on the broad.** **5.3 Teacher say three-digital numbers (from 0, 1-9) and have students to write them on the broad.**			Great! Pass around markers, erasers and the math boards. Everybody has one marker, one eraser and one math board. **根據第一階段評審意見增加活動:** **Now, use the other side of math broad. I say a number, you write down a number. All right?** **0, raise your board and let me see.** **Great. Good job.** **Let's try two-digital numbers.** **Eyes on me. If I say one, two, you write down 12, all right?** **One, two.** **Let's try three-digital numbers.** **Eyes on me. If I say one, two, three, you write down 123, all right?** **One, two, three.**
	6. Math board (數學板，見附件一) 6.1 Teacher demonstrates saying the sentence of addition while writing the numbers on the math board. 6.2 Teachers guides the entire class to say and write the numbers in the math board. 6.3 Teacher monitors the students 'saying and writing numbers. **6.4 以下於第一階段已設計，但因因匆忙趕出教案，因此沒有描述，現在補述。** **Teacher guides the students to see the patterns that the same numbers**	3' 5' 2'		Now, eyes on me. You write 1, 2, 3, 4, 5 here. (In the first horizontal column) Good, show me your board. Your write 1, 2, 3, 4, 5 here. (In the first vertical column). Good, show me your board. Use your pen to point 1 here (In the horizontal column) and say "one". Use your pen to point 1 here (In the vertical column) and say "and one". In the right box of the table, write down two and say "is two". Show me your board. Good.

		are in the diagonal lines (斜線上，件活動照片).			Let's try. One. Plus two. Is three. Good. Show me your board. Good. Let's try. Two, Plus one, Is three. Good. Show me your board. Good. Now, you say and write down the numbers in the other blank boxes of the table. One, two three, go. If you are finished, raise your board. Let's check. Circle two. Circle all the <u>threes</u>. Do you see the pattern? Great. Good job. Now, clear your board. Let's do it one more time. Write down 1, 2, 3, 4, 5 here and 1, 2, 3, 4, 5 here. If you finish, raise your board. Good. Are you ready? Off you go. **4.4 以下於第一階段已設計，但因匆忙趕出教案，因此沒有描述，現在補述。** Eyes on me. Do you see all the number 2 are in a diagonal line? And all the number 3 are in another diagonal line? How about 4 and 5? Now, take your markers to draw the diagonal lines and check whether your numbers are right.
	Students are able to state addition in a dialogue situation with addition cards. (學生能夠在對話中運用加法卡操作中陳述加法)	7 Say and Exchange (加法卡交換，見附件二) 7.1 Teacher shows the addition card and guides students to say $1 + 1 = 2$ 7.2 Teacher has two students to say the addition on the cards and then exchange the cards. 7.3 Teacher guides the entire class to say the addition and exchange the cards. **7.4 以下為第二階段議課後所增加活動：** Teacher guides students to use another set of addition cards which are without the answers (e.g. 1+1=□) to have the above activity.	2' 3'		Now, let's try another thing. What is this? Yes, <u>two</u> and <u>three</u> is <u>five</u>. I need two volunteers. Peter and Sophia, please come here. Each of you, take one card. Peter, you first. Show Sophia the card and say it. Good. Sophia, now, your turn. Good. You two, exchange the cards. Now, pass the cards. Everybody, get one card. If you get the card, raise your hand. Great. Are you ready? Now stand up. Push in your chairs. Talk and exchange your cards until I say 'Stop'. One, two, three, go. **7.4 Same as the above**
		【Integration and conclusion 統整與總結】 **8. 以下為第二階段評後所增加活動** Find Your Partner: Teacher guides every student to hold up high a number card, so everyone can see everybody's card. Teacher says a number and students need to sound the numbers on their cards and find a partner to make a sentence of addition. For example, the teacher say "five", students with numbers of one and four, or two and three need to find each other and say □ plus □ is five.	5'		7. **以下為第二階段議課後所增加活動** Now, let's try a new game. Everybody, take a number. Now I say "five". Who got one? Who got four? All right. You need to find each other, hold hands and say "One plus four is five" together. Who got three? Who got two? You need to find each other, hold hands and say "Two plus three is five" together. If your number is bigger than five, please bend your knees. Are you ready? Let's go.

以下為第三節		【Motivating 引起動機】 1. Review by the free practice activities 1.1 重複第二節課的 2. Number Champion (數字冠軍) 1.2 重複第二節課 cube activities 的 4.3 1.3 重複第二節課 8	5' 10' 5'		Same as the parts of the second lesson, including： 2 (Number Champion), 4.3 (Cube Activities) and 8 (Find Your Partner).

	Students are able to state addition of the Addition Facts Table.
	(學生能夠陳述在數字加法直式表上的加法)
		【Developing 發展活動】
		5 Point and say on the Addition Facts Table(描述數字加法直式表，見附件三)
		5.3 Teacher demonstrates pointing to the Addition Facts Table and says the addition.
		5.4 Teacher guides the entire class to point and say the Addition Facts Table.
		5.5 以下為第二階段評後所增加活動:
		Teacher gives a piece of paper to every student. Every student write the Addition vertical form but without the answer. For example,
		   2
		+ 3
		─────
		  □
		Teacher guides the students to exchange their paper and say the sentence (e.g. Two plus three is five) to each other.
			7'
			
			7'
					Now, pass around the Addition Facts Table. Has everybody got one? Good.
					
					Eyes on me. Use your finger to point and say. Zero plus one is one. Zero plus two is two…Up to Zero plus ten is ten. Are you ready? Let's try it together. One, two, three, go. Good job.
					
					Eyes on me again. Try this. One plus one is two. One plus two is three… Up to one plus nine is ten.
					
					All right, let's try two, three, to ten. The last one is ten plus zero is ten. One, two , three, go.
					
					The last person from each line, collect the Addition Facts Table for me. Thank you.
					
					2.3 以下為第二階段評後所增加活動:
					Now, everybody take a piece of paper and eyes on me. On your paper, write a math question in a vertical form like this. All right? Now you write your math question and cover it. Do not let others see it. If you are finished, raise your hand. Great. Stand up. Push in your chairs. Who can be my helpers? Tina and Joyce, come up there. Tina, you show your paper to Joyce. Joyce you say it. Great. Is she right? Yes, she is right. Tina, you give the paper to Joyce. Now Joyce, your turn. You show your paper to Tina. Tina, could you say it? Is she right? Yes, she is right. Joyce you give your paper to Tina. Is this all right to everybody? Good. Let's try it. Off you go.

	Students are able to give responses with the concept of additive decomposition. (學生能夠以加法分解的概念回答問題)	【Integration and conclusion 統整與總結】 Additive decomposition (加法分解) 1. Teacher guides students to answer the questions about additive decomposition. 2. Teacher asks questions about the additive decomposition. Teacher writes down and displays the students' numerical responses on the blackboard.	6'		Let me ask you a question. How can I make two? Right. One plus one is two. How can I make three? Right. One plus two is three. How can I make another three? Right. Two plus one is three. Look at all the numbers. That's the lesson for today.

指導要點及注意事項（若無，此欄可刪除）

1. 進行遊戲或操作各種教具需循序漸進，在行間巡視中，仔細觀察學生的個別反應，確定每個學生都可以清楚步驟，再進行下一步。
2. 課程成功的關鍵在於建立孩子在各種運用數字的情況，建立英語的直接反應。全英語教學是必要的，夾用中文無法建立英語的直接反應。

參考資料（若無，此欄可刪除）

運用教具: 附件一 (數學板)、附件二(加法卡)、附件三(數字加法直式表)。

Math Board

$$4+6=10$$

$$2+4=6$$

$$2+8=10$$

$$3+6=9$$

$$3+5=8$$

ADDITION FACTS TABLE

0 + 0 0	0 + 1 1	0 + 2 2	0 + 3 3	0 + 4 4	0 + 5 5	0 + 6 6	0 + 7 7	0 + 8 8	0 + 9 9
1 + 0 1	1 + 1 2	1 + 2 3	1 + 3 4	1 + 4 5	1 + 5 6	1 + 6 7	1 + 7 8	1 + 8 9	1 + 9 10
2 + 0 2	2 + 1 3	2 + 2 4	2 + 3 5	2 + 4 6	2 + 5 7	2 + 6 8	2 + 7 9	2 + 8 10	2 + 9 11
3 + 0 3	3 + 1 4	3 + 2 5	3 + 3 6	3 + 4 7	3 + 5 8	3 + 6 9	3 + 7 10	3 + 8 11	3 + 9 12
4 + 0 4	4 + 1 5	4 + 2 6	4 + 3 7	4 + 4 8	4 + 5 9	4 + 6 10	4 + 7 11	4 + 8 12	4 + 9 13
5 + 0 5	5 + 1 6	5 + 2 7	5 + 3 8	5 + 4 9	5 + 5 10	5 + 6 11	5 + 7 12	5 + 8 13	5 + 9 14
6 + 0 6	6 + 1 7	6 + 2 8	6 + 3 9	6 + 4 10	6 + 5 11	6 + 6 12	6 + 7 13	6 + 8 14	6 + 9 15
7 + 0 7	7 + 1 8	7 + 2 9	7 + 3 10	7 + 4 11	7 + 5 12	7 + 6 13	7 + 7 14	7 + 8 15	7 + 9 16
8 + 0 8	8 + 1 9	8 + 2 10	8 + 3 11	8 + 4 12	8 + 5 13	8 + 6 14	8 + 7 15	8 + 8 16	8 + 9 17
9 + 0 9	9 + 1 10	9 + 2 11	9 + 3 12	9 + 4 13	9 + 5 14	9 + 6 15	9 + 7 16	9 + 8 17	9 + 9 18